

A Publication from INPUT's Market Analysis Programme—Europe

## European Software and Services Market, 1990-1995—Insurance Sector

### European Insurance Companies Face Major Information Systems Rethink

European insurance companies are being forced to fundamentally rethink their approach to information systems as they face the need to create fully electronic systems to compete effectively in the 1990s. These new demands are driven by EEC deregulation and the competitive moves by the banking establishment into the insurance field. The resultant demand for software and services is creating a rapidly developing opportunity for vendors that offer networking services, specialised software and professional services.

Investment in information technology is running at 15% of insurance companies' operating expenses. The large insurance companies looking to become pan-European operations are prepared to allocate considerable financial resources to information systems, mirroring the activities of the banks prior to the "Big Bang" in the City of London. In insurance, the "Big Bang" is the dual advent of the 1992 Single Insurance Market initiative and the moves by the banking industry to offer insurance services. The link between banking and insurance has been further strengthened by a spate of merger and acquisition activity and the establishment of alliances between banks and insurance companies throughout Europe. The exploitation of the obvious synergy between banking and insurance services to develop complete financial services portfolios will require considerable investment in information technology.



## **The Insurance Industry Information System Challenge**

- Pan-European insurance market
- High information insurance market
- High information system expenditure
  - 15% of operating expenses
- Demand for flexible, responsive systems

Firstly, software and services vendors have the chance to satisfy the requirements of pan-European-orientated companies for integrated information systems and networks. Specific vendor opportunities include the provision of financial analysis programs, decision support tools, electronic information services (EIS), electronic data interchange (EDI) systems, application tools and custom software solutions. These large companies need solutions to their applications backlog whilst at the same time requiring flexible systems and systems compatibility.

Secondly, in local insurance industry markets there is considerable opportunity for vendors to provide software products and turnkey systems. Agents and brokers will be placing contracts for bespoke software with companies that understand the user's business and have established a presence throughout Europe.



## Software and Services Opportunities

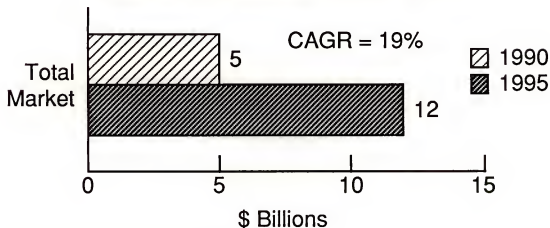
- Systems and network integration
  - New products and services
  - Competitive edge
- Software products
  - Custom software
  - Packaged solutions

Insurance companies are looking for changes in distribution channels in order to improve levels of service and develop expertise in systems and network integration, as well as use of the latest technologies. Insurers are looking to be leading-edge players in the electronic revolution of the 1990s. Professional services companies will need a thorough understanding of the insurance business to win these development contracts.

Software and services vendors need to offer products and services that provide the large insurance companies a competitive edge over the banks. Systems need to be flexible and compatible. Vendors should also be looking to provide software products that enable local insurers to interface effectively with head office.



### European Insurance Sector: Software and Services Market Forecast, 1990-1995

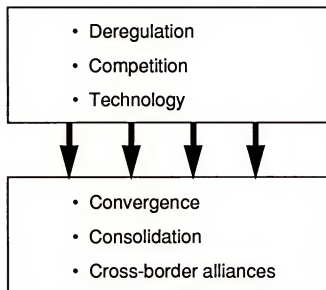


The volatility of the European insurance industry will have a considerable impact on information and communications technology expenditures. INPUT forecasts that the insurance sector software and services market will be worth \$12 billion in 1995.





## European Insurance Industry— Driving Forces



Insurance in Western Europe is undergoing a period of profound change. Insurance companies have been slow to respond to the changes surrounding them compared to other sectors (such as banking), sheltered as they are in some markets by regulators' convictions that insurance is more important to consumers than other financial services, and in other markets by the near-impenetrability of insurers' products and financial statements.

This change has been caused by a complex interaction of forces—including deregulation, competition, rapid technological developments and the

gradual penetration of banks into traditional insurance markets. Exhibit 4 shows that convergence, consolidation and cross-border alliances are occurring all over Western Europe in the same manner as happened with banks and investment houses. However, insurers are concerned about the entry of the banks into their traditional markets and are having to expand rapidly when profits are contracting in a belated attempt at becoming international all-purpose operations. Meanwhile, insurers are operating in an extremely competitive environment within their domestic markets.



## Insurance Sector under Pressure

- Single European market
- Gradual penetration of banks
- Attitudes to security
- Growing elderly population
- Global warming

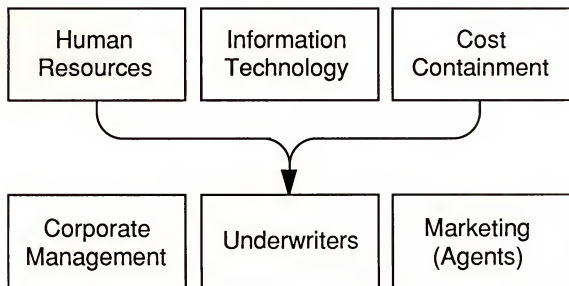
External

Internal

Additionally, there is the challenge of the single European market as well as the gradual entry of banks into the insurance business. Within the insurance business itself there are other, more pressing concerns: a growing elderly population, the effects on the climate of global warming and the increasing (apparent) negligence of large multinationals with regard to security as they try to improve efficiency and maintain competitiveness in an increasingly cut-throat market. Exhibit 5 shows pressures on the insurance industry.



## Key Operational Issues



- Service differentiation
- Speed of client response

The key operational issues identified amongst insurance companies looking to compete with banks are:

- Human resources
- Information technology
- Cost containment

The required refocussing of staff responsibility is resulting in increased use of information technology. However, there is still enormous scope for reducing the volume of clerical tasks and using technology to improve customer service and product delivery. As a result, INPUT anticipates that the industry will invest

heavily in client-related rather than policy-related systems. A major opportunity is innovative technology such as image processing and expert systems.

However, one of the problems in the insurance industry—although not exclusively an insurance problem—is that past investment in technology has failed to deliver the extra service capability or financial return expected. Future investment needs to be clearly focussed so that real progress can be made in insurance service levels and product distribution whilst not increasing overheads.



The insurance industry has been trying to resolve the human resources versus investment in technology dilemma since the mid-1970s, and a few companies have achieved full implementation plans. Their systems carry out the essentials, such as:

- Claims registration
- Claim acknowledgement
- Third-party instruction (for adjustors, surveyors, et al)
- Claim payment
- Claim statistics

There remain opportunities for software and services vendors in that a claims operation of insurers or brokers deals with a number of different business areas and as a result the provision of statistics is a key element of the internal service and support function. For example, corporate management, underwriters and marketing are all internal clients of the claims department, each with different information requirements, each a key area of the business and each requiring network and systems integration, software products and professional services.

Many insurance companies are looking for competitive edges in service differentiation and require a high level of information, to maintain:

- Service level of claims
- Customer support opportunities
- Trends in complaints
- Renewal positioning of claimants
- Average time between notification and settlement

Database management software and application software that run on efficient, fast networks will speed this process.

The burden of internal service will increase as underwriters attempt to target precise groups and produce different rates and marketing profiles. To achieve a high level of service, there will be an increasing need for EIS and financial analysis software.

General information on clients, trends and service opportunities will require integrated systems, application software products and, in the less developed markets, turnkey systems.

The impact of these three key groups is illustrated in Exhibit 6.





## Areas of Opportunity

- Systems and network integration
- AI/Expert systems
- Custom software
- Application development tools
- Network applications

As insurance companies strive to compete more effectively, they are offering an increasing gamut of products and services that compete with those of banks. However, in order to effectively carry out large-scale systems development and systems and network integration projects, insurers are looking for systems and network integrators with expert knowledge of the insurance industry (or even of a specific subsector of the industry), as well as experience in developing complex systems for the industry. This search for expert knowledge and experience presents a challenge for systems integrators.

Repetitive, high-volume applications that often require some kind of judgement by insurers lend themselves to artificial intelligence and expert systems and thus are being developed for a variety of insurance applications, including underwriting/risk management, claim management, adjusting, investment management, personal financial planning,

policy customisation by agents and medical review analysis.

Network and electronic information services for electronic mail and EDI services are used by all subsectors of the insurance industry. This market sector will grow rapidly over the forecast period. EDI in particular offers considerable expense and time reduction in moving data between agencies and insurers, and, ultimately to consumers.

The RINET and LIMNET networks use the IBM Information network; the BROKERNET service uses the INS/GEIS network; France has adopted the Belgian ASSURNET network service using the Transpac network; and Siemens and a consortium of German insurance companies set up the MEGANET network. All provide connectivity to thousands of organisations and agents. In addition, there are also other private networks available for EDI services to the insurance



industry. There are opportunities here for vendors to develop network applications for the growing network infrastructure in Europe.

Personal computers are being used for many applications in the insurance industry; spending on microcomputers is expected to increase by 50% in 1990. In the more mature markets of Northern Europe, an example of an application would be agents' use of PC software as a marketing tool, enabling them to make a more effective demonstration and to present more alternatives to the customer during a sales call. In the less developed markets of Southern Europe, turnkey systems, a sector dominated by Nixdorf, will prove the ideal solution for the smaller insurance operations.

Most IS departments and some end users within the insurance industry are developing their own applications by using external resources as a supplement to internal resources. There is consequently an excellent opportunity for application development productivity tools. Another opportunity is for vendors to provide systems for new areas in insurance —e.g., long-term disability insurance—as well as for new distribution channels, including those in foreign markets. These areas of opportunity for software and services vendors and insurance companies are shown in Exhibit 7.



## Issues and Opportunities for Software and Services Vendors

### Issues

- Consolidation within industry
- Cost reduction



### Opportunities

- Network integration
- EIS
- Decision support tools
- Custom software

Driving forces within the insurance industry translate into major issues for software and services vendors that sell to the industry. Certainly any new systems must provide for the legislative changes occasioned by the European Commission's financial services directives. These changes directly affect the industry and those selling to the industry.

One of the key issues for software and services vendors is the insurance companies' need for cost containment. With insurance companies in Western Europe expanding by mergers and acquisitions, there is a need to boost productivity and improve revenues; vendors should consequently be looking to offer additional services as a means to

maintain a competitive edge and improve productivity. One of the key areas is risk management: financial analysis programs, decision support tools and electronic information services providing actuarial and investment information are some of the products and services that go some way towards reducing insurers' risk exposure.

With the spate of mergers and acquisitions occurring in the Western European insurance industry, software and services vendors are presented with an opportunity to develop ways of connecting systems using different equipment, software and services. However, these products need to be made available so that information can be shared within the resulting organisation in a short time frame: this



prompt sharing is unquestionably the challenge. Another current difficulty vendors face is the length of the development cycle. The length needs to be reduced to satisfy the demands of insurance. On the other hand, this perpetual difficulty offers opportunities for new players.

IS managers within insurance companies are faced with a series of challenges as a result of the frenetic activity taking place in the insurance industry: IS managers' central objective—providing services to end-user groups—is hindered by the need to improve revenues and cut costs. With information handling being such a key activity in insurance, IS managers are looking for flexible systems that can be expanded and modified for long-term usability.

This need for flexible, easily expandable and modifiable systems is particularly noteworthy given the huge backlog of applications at insurance companies: users constantly need new applications, enhancements to existing ones and maintenance of existing operations.

Furthermore, with consolidation occurring as a result of acquisitions, IS managers are finding that they are being called upon to integrate systems as well as establish decentralised IS functions. In addition, there is a chronic shortage of skilled staff throughout Western Europe. As a result, INPUT is anticipating high growth in the professional services sector as more and more companies turn to third parties to help carry out these sea changes.

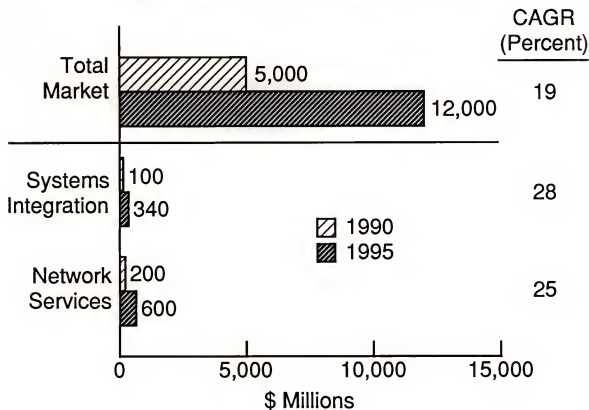
Finally, for end-user departments within insurance companies, the issues are clear: access to information enables end users to offer more services and a better quality of service to customers. In addition, end users want systems that are compatible with customers' and suppliers' systems, as well as systems within the organisation. With end users becoming more involved in the application development process, INPUT anticipates that the network and software products sectors of the insurance market will experience strong growth. These issues and opportunities are listed in Exhibit 8.





Exhibit 9

### European Insurance Sector: Software and Services Market Forecast, 1990-1995

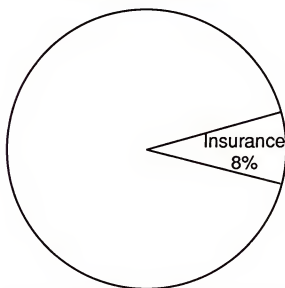


Uncertainty continues to surround market acceptance of technology as well as conceptions of the desirable rate and direction of technological change. However, INPUT forecasts that expenditures on software and services will, in relation to other categories of noninterest expense, increase dramatically over the next five years. The degree of increase may prove a new phenomenon for some European insurance companies.

Exhibit 9 illustrates that expenditures for software and services by the Western European insurance industry are estimated to reach \$5.0 billion in 1990.



### European Software and Services— Insurance, 1990



Total Insurance Market = \$5 Billion

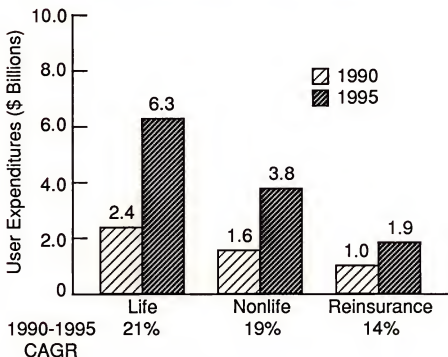
Total Software and Services Market = \$60 Billion

Exhibit 10 shows that insurance represents 8% of the software and services market. Growth will be a compounded annual 19% over the next five years, reaching \$12.0 billion by 1995. These figures are a result of the insurance industry's being an extremely competitive, yet currently fragmented, industry that relies on software and services for support in the areas of new product and service offerings and new channels of distribution, revenue production and cost containment.

During the five-year period 1990-1995, projected growth is highest in the areas of network services (23%) and systems integration (25%). Software products, turnkey systems and professional services will also show growth in excess of the industry average.



## European Insurance Market Forecast by Business, 1990-1995



### Life

The life subsector represents the largest of INPUT's three insurance subsectors. The group is also the fastest growing in terms of revenue, premium receipts and software and services spending, especially in network services and software products. Software and services expenditures for the life subsector will be \$2.4 billion in 1990. Expenditures are expected to climb to \$6.3 billion over the next five years. The life insurance industry has recognized the need to invest in software and services. There is a considerable policy, claim, actuarial and financial information involved with the operation.

### Nonlife

Like the life sector, the nonlife, or general, insurance subsector is expected to show strong growth over the next five years, from \$1.6 billion in 1990 to \$3.8 billion in 1995. Spending will occur primarily in the

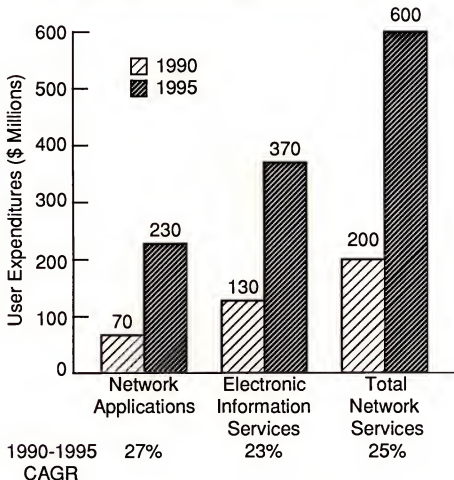
areas of network services, software products and systems integration. The subsector's underwriting loss has improved significantly, resulting in the subsector being in a position to invest in software and services and to expand in-house processing. Companies will purchase application software and contract with systems integrators for systems development and integration. Furthermore, investments in stocks and bonds will make electronic information services of increasing importance in helping insurers to track these investments.

### Reinsurance

The reinsurance subsector has a high loss ratio. Reinsurance is the high-risk segment of the industry—profits or losses can vary widely every year. As a result, INPUT's market forecast for the reinsurance subsector shows a slightly lower growth figure than for the other two subsectors.



### European Insurance Sector Network Services Market Forecast, 1990-1995



Insurers lag behind the banking and manufacturing industries in systems applications. Insurers have been slow to bring information technology managers to positions of influence. The tendency is for boards or decision-making groups to decide what they are going to do and fail to tell the information services division soon enough. Some of the biggest companies still don't have a client base, but a contract base instead. The older systems designed in the 1960s and developed in the 1970s were built around processing insurance contracts. The focus today is on servicing

clients or intermediaries. The need to rewrite software represents a substantial investment.

One of the largest growth areas in the 1990s in the insurance software and services sector will be network services. For example, by the end of 1990, 90% of the market will be connected to LIMNET (London Insurance Market Network). (Currently 20% of the market is connected.) Forty percent of those interviewed by INPUT saw LIMNET as providing opportunities for underwriters to





bypass brokers and deal directly with the insured. Dealing directly will dramatically alter the dynamics of the market.

Insurance companies are relying more on network services, especially EIS (on-line databases) and insurance industry networks (RINET, BROKERNET and LIMNET in the U.K.; ASSURNET in Belgium and France; and MEGANET in West Germany, for example). These networks provide the capacity for efficient data interchange.

As a result, expenditures in these areas are forecast to increase significantly over the forecast period. Exhibit 12 outlines the growth expected in network services, including a breakdown between network applications and EIS for the insurance sector.

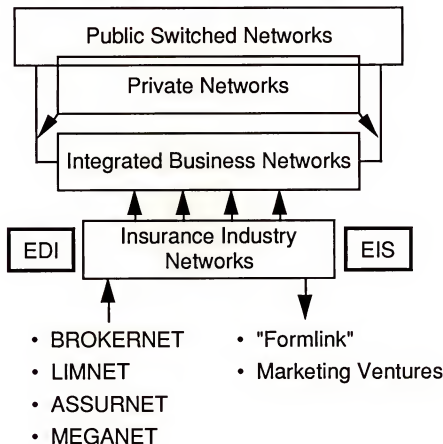
Furthermore, the insurance industry is a natural candidate for electronic data interchange (EDI):

- INS runs the BROKERNET motor insurance system.
- Istel Financial Services and Misys Dataller, a software house specialising in insurance systems, have a joint-marketing venture to provide EDI between intermediaries and insurance companies. Joint marketing applies also to the motor insurance area.
- IBM provides the network for a development in insurance EDI that could lead to a revolution in the way intermediaries deal with insurance companies.

An important development for the industry is that a consortium of leading U.K. insurance companies are funding the development of a system by Fame Computers called "Formlink", which is effectively a conventional EDI system. Although insurers having been unwilling to use standard message formats, Formlink provides electronic replicas of paper documentation.



## Networks: The Way Forward



Establishing a common electronic network is crucial for the insurance business. Costs can be cut and individual insurers can compete through the quality of service they are prepared to offer their intermediaries once a level playing field has been established. These conclusions are confirmed by the insurers themselves, who want standard forms for attaining quotations and for the processing of policies.

Significantly, ten leading companies in the Lloyds of London insurance market have agreed to begin trading insurance risks electronically in 1990 and to do away with

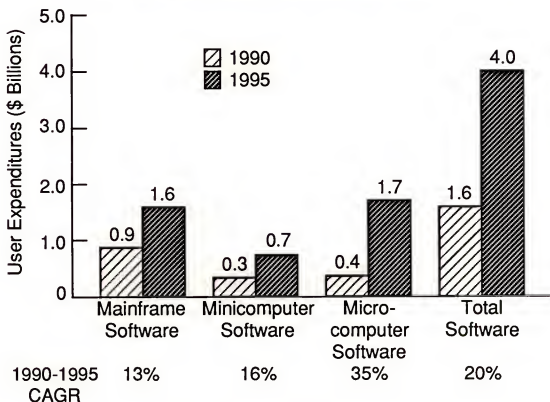
some of the face-to-face contact that dominates underwriting transactions. In continental Europe, a consortium of European manufacturers and users led by NV Phillips has begun a four-year project to develop an electronic case-handling system for the insurance industry. The system uses broadband communications to speed up by 50 percent the process of handling insurance policies in Europe. The project team aims to develop a system to let insurance companies move voice, data, text or video information from a company to the public switched network at up to 100 megabits per second. From there, the information would be



transferred at 2 mbps across the public network to other sites. The project is also designed to reduce paper use—the European insurance industry uses up to 40 million trees a year for paper. The project team plans to develop a system based on Phillips' fibre optical storage technology and gateways to the public network. The systems will in turn link to a public 2-mbps broadband network that is planned for trial operation in 1991. Seventeen members of CEPT agreed last month to run the European Broadband 2-mbps Interconnection Trial (called EBIT) in 1991. Other pilot applications are expected to emerge to take advantage of EBIT.



### Western European Insurance Sector Software Products Market Forecast, 1990-1995



On the software products side, the involvement of major insurance companies in software houses specialising in insurance broking and intermediary systems has had a profound effect. Only Misys and MCS are truly independent and even Misys is expanding into noninsurance software markets and may well sell its insurance broking systems division.

The combination of networks and software can provide a massive competitive edge. For example, Policy Master's idea of giving £750,000 in technology grants is the first stage in implementing the products and services being developed with Policy Master's Validated Business System

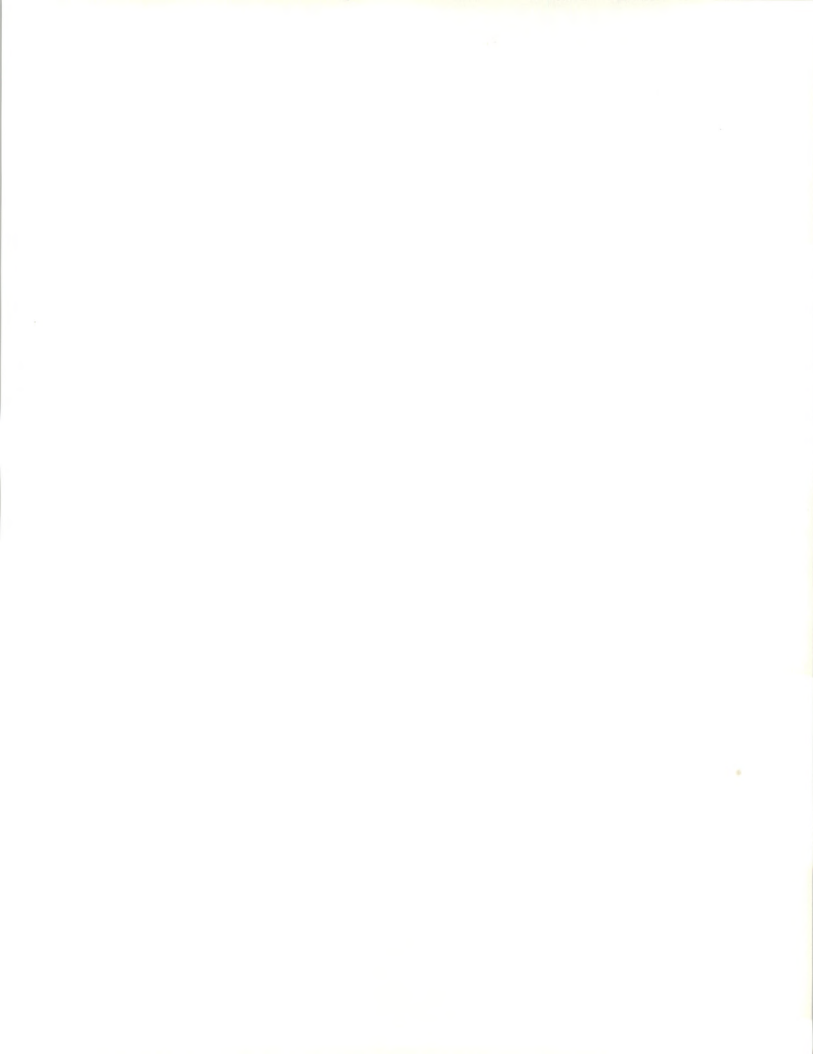
Initiative, which has the backing of most of the leading insurance companies. The network provides EDI between the broker and the insurer, and electronic mail and interactive insurer mainframe services. The network is geared to enable Policy Master to establish the largest number of networked insurance brokers by 1990 and to deliver products that Policy Master has developed with a number of insurers. Furthermore, IBM has appointed Policy Master the authorised dealer for the IBM 6150 and the AIX. Insurance companies will increasingly invest in systems and communications technology in support of their increasingly pan-European business operations.





Expenditures for software by the insurance industry are expected to grow at approximately a 20% CAGR over the next five years. Many insurance companies are handling their own information processing requirements in-house through IS departments, and as a result IS departments purchase applications when the available products meet their requirements. The types of industry-specific application software products available to the insurance industry are extensive. Products are available that handle most types of policies, claims administration, billing, client profiling, actuarial and investment analysis, decision support and management reporting.

Within the insurance industry, expenditures for microcomputer applications will grow faster than expenditures for mainframe and minicomputer applications or any other type of information service. The information-intensiveness of insurance has resulted in a very high penetration by microcomputers. For example, laptop computers are used by agents to provide claim and policy information, whilst databases containing actuarial information can be downloaded to these microcomputers so that a policy can be generated on-the-spot during a sales call.



## Key Vendor Opportunities

- Professional services
- Systems integration
- Network services
- AI/Expert systems
- Productivity tools

In conclusion, INPUT believes technology will be directly linked to capturing further market share—the focus will be on sales and marketing information systems and customer monitoring to exploit cross-selling opportunities to the full. An effective presence in the corporate market will be impossible without much greater use of technology; in the life and nonlife sectors, the role of transaction processing systems, for example, will be a key determinant of the ability to participate.

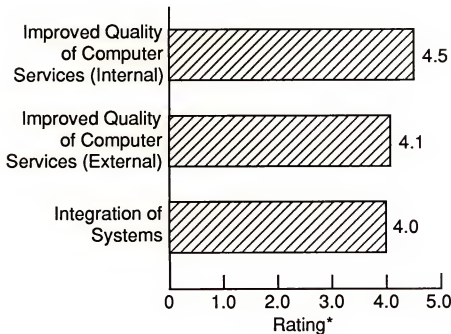
In the relatively undeveloped markets of Southern Europe, turnkey systems and professional services will show high growth over the forecast period as microcomputer systems for agents and brokers are made available and custom software development is required to supplement internal IS resources. Information technology, imaginatively used, can be a powerful ally in insurance companies' efforts to cope with the volatility that has shaken the industry over the past decade.

Greater expenditure will be devoted to all aspects of technological implementation. There will be increased investment in high-calibre systems personnel, as well as demand for professional services. Insurance companies will continue to devote much of their attention to internal use of technology and will promote productivity improvements and cost containment, if not reduction.

Insurance brokers will be increasing targets for improved automation, whether through more-sophisticated distributed processing systems or through automation of a wide range of clerical functions, possibly including fully automated branches and developments in new fields of application (such as expert systems and artificial intelligence).



### Insurance Companies' Priorities in Software and Services



\*1 = unimportant, 5 = very important.

End-user requirements will also change. If competitors are offering new products and services, end-user departments will require systems to provide the same types of products and services. Enhancements to existing systems and development of new systems will inevitably have an adverse effect on the IS budget. Furthermore, there is a chronic backlog of planned application development projects within insurance.

There are two key objectives for IS managers (sceptics might suggest that these objectives are mutually exclusive):

- To provide end users with the services they require in time and at a reasonable cost

- To reduce the backlog of application development projects and maintain ongoing operations

To meet user requirements, new systems have to be developed and/or old systems have to be enhanced or expanded. Projects identified by respondents for 1990 include developing systems that speed the delivery of actuarial, policy and financial information to end users as well as to customers. Integrating systems is also a key priority after the wave of acquisitions across Western Europe. Integration leads to a more efficient use of information.



## **New Technology Planned**

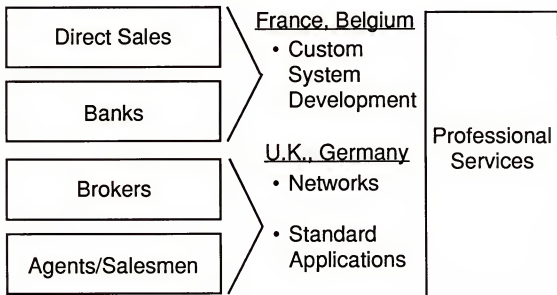
- Database management systems
- Decision support systems
- EDI interface
- Image processing

Decentralisation of some IS functions is occurring in some organisations, whilst the new technologies and applications planned by insurance companies, coupled with the external pressures to become more competitive, quickly translate into a considerable opportunity for software and services vendors with expertise in systems and network integration, software products and turnkey systems. Database management and decision support systems are already being developed by the leading insurance companies, whilst EDI and image processing are likely to represent a large proportion of IS activity into the 1990s.





## Insurance Companies' Systems Needs



The fragmented nature of the insurance industry means that the software and services market has distinct national characteristics, with France and Belgium concentrating on major in-house developments and the U.K. and Germany looking more towards networks, packaged solutions and turnkey solutions. The strategic positioning occurring in Europe has ensured that insurance companies will

need to invest in systems, networks and software as a result of competitive pressures, forcing them to sacrifice short-term earnings in favour of strategic investment decisions in their pursuit of diversification. This, for software and services vendors, is the key challenge. The challenge of systems needs is summarised in Exhibit 18. A major opportunity for professional services companies.

This Research Bulletin is an excerpt from a full research report issued as part of INPUT's Market Analysis Programme—Europe. If you have questions or comments on this bulletin or wish to purchase the report, please contact Peter Lines at INPUT, Piccadilly House, 33/37 Regent Street, London SW1Y 4NF, England. Tel. (071) 493 9335, Fax (071) 629 0179











# About INPUT

INPUT provides planning information, analysis, and recommendations to managers and executives in the information processing industries. Through market research, technology forecasting, and competitive analysis, INPUT supports client management in making informed decisions.

Continuous-information advisory services, proprietary research/consulting, merger/acquisition assistance, and multiclient studies are provided to users and vendors of information systems and services (software, processing services, turnkey systems, systems integration, professional services, communications, and systems/software maintenance and support).

Many of INPUT's professional staff members have more than 20 years' experience in their areas of specialisation. Most have held senior management positions in operations, marketing, or planning. This expertise enables INPUT to supply practical solutions to complex business problems.

Formed as a privately held corporation in 1974, INPUT has become a leading international research and consulting firm. Clients include more than 100 of the world's largest and most technically advanced companies.

---

## INPUT OFFICES

---

### North America

#### Headquarters

1280 Villa Street  
Mountain View, CA 94041-1194  
(415) 961-3300  
Telex 171407 Fax (415) 961-3966

#### New York

959 Route 46 East, Suite 201  
Parsippany, NJ 07054  
(201) 299-6999  
Telex 134630 Fax (201) 263-8341

#### Washington, D.C.

1953 Gallows Road, Suite 560  
Vienna, VA 22182  
(703) 847-6870 Fax (703) 847-6872

### International

#### London

Piccadilly House  
33/37 Regent Street  
London SW1Y 4NF, England  
(071) 493-9335  
Fax (071) 629-0179

#### Paris

52, boulevard de Sébastopol  
75003 Paris, France  
(33-1) 42 77 42 77 Fax (33-1) 42 77 85 82

#### Tokyo

Saida Building  
4-6, Kanda Sakuma-cho  
Chiyoda-ku, Tokyo 101, Japan  
(03) 864-0531 Fax (03) 864-4114





INPUT

1953 Gallows Road, Suite 560, Vienna VA 22182 (703) 847-6870  
Fax (703) 847-6872

**FACSIMILE TRANSMITTAL FORM**

Date: 10/9/90  
Destination: MTV  
ATTENTION: Andrea J.  
Telephone Number: \_\_\_\_\_  
Facsimile Number: \_\_\_\_\_

From: Maureen J.  
Number of Pages: 1 of 5  
Confidential: Yes \_\_\_\_\_ No X  
Urgent: Yes X No \_\_\_\_\_

*Pls delivered  
A.S.A.P.*

Description: Attached is a sample of what  
a file prints like - Pls show  
to Calvin - If you have  
any ideas/solutions for this  
please call me or Doug  
Wilder.

Thank

INPUT Project Charge Code: \_\_\_\_\_

File: \_\_\_\_\_

Chron: \_\_\_\_\_

Contact: \_\_\_\_\_

Other: \_\_\_\_\_ (specify) \_\_\_\_\_

CALIFORNIA - NEW YORK - WASHINGTON, D.C. - LONDON - PARIS - TOKYO

1870

January 1st

Received of Mr. J. H. Smith

the sum of \$100.00

for the purchase of land

in the town of

and county of

State of

Witness my hand and seal

this 1st day of January

1870

John H. Smith

Notary Public

for the State of

My commission expires

the 1st day of

1871

Witness my hand and seal

this 1st day of

1870

John H. Smith

Notary Public

RCV BY:XEROX TELECOPIER 7011 ;10- 9-90 8:27AM ;  
SENT BY:INPUT WASHINGTON DC ;10- 9-90 11:32AM ;

7038476872→  
7038476872→

4159613968;# 2  
4159613968;# 2

•7 GA# 6g  
Ràràààà

/



RCV BY:XEROX TELECOPIER 7011 ;10- 9-90 8:27AM ;  
SENT BY:INPUT WASHINGTON DC ;10- 9-90 11:33AM ;

7038476872+  
7038476872+

4159613968;# 3  
4159613968;# 3

4

2



RCV BY:XEROX TELECOPIER 7011 ;10- 9-90 8:27AM ;  
SENT BY:INPUT WASHINGTON DC ;10- 9-90 11:33AM ;

7038476872->  
7038476872->

4159613968;# 4  
4159613968;# 4

siLiLiLiLi"lnXi fi fi\_xàn'P«T  
«t«è»«j9UÄ»

3





<Normal>This chapter contains detailed analyses of major SI competitors in profile format. The general format of the profiles is the same. However, there are some minor variations among profiles depending upon the nature of the vendor and the availability of information. In general the structure is as follows:<Normal><Normal>N Key SI Contacts - A listing of principal systems integration contacts in the management structure of the vendor organization<Normal><Normal>N Description of the Principal Business - A summary of the history of the firm focusing on key points relevant to the company's participation in the systems integration business<Normal><Normal>N Company Competitive Position - A discussion of the company's position in the information systems/systems integration marketplace<Normal><Normal>N Markets Served - A description of the vertical and cross-industry markets currently served by the company<Normal><Normal>N Recent Events - A history of recent events, including merger and acquisition activity, significant product announcements, etc., relevant to the company's posture in the systems integration market<Normal><Normal>N SI Organization - A detailed analysis of how the firm is organized to support its SI business operations. This section typically includes information on the structure, number of employees involved and their distribution over various SI activities, as well as organizational trends, etc.<Normal><Normal>N SI Business Objectives - A discussion of the factors motivating the vendor to be in the systems integration business.<Normal><Normal>N SI Capabilities Evaluation - INPUT's assessment of the vendor's capabilities in 14 specific areas based on direct discussion with the vendor and INPUT's ex

4

